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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,146

08/06/2007

Hiroyuki Koyama

YH0022-US1

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27788

7590

10/06/2008

Tyco Electronics Corporation
309 Constitution Drive
Mail Stop R34/2A
Menlo Park, CA 94025

EXAMINER

LEE, KYUNG S

ART UNIT

PAPER NUMBER

2832

MAIL DATE

DELIVERY MODE

10/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/573,146		KOYAMA ET AL.	
	Examiner		Art Unit	
	Kyung Lee		2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/22/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1 to 7 are rejected under 35 U.S.C. 102(a) as being anticipated by Chu, US Pat. 6,794,980.

3. Chu teaches a thermistor having variable resistance part 51 (a PTC in fig. 5 and col. 2, lines 55-60) with a first electrode 52, a second electrode 532 and a third electrode (comprising of 531 and 533) and not in contact with the first or second electrode. A heating part 56 and 58 integrally formed with the same material as the variable resistance part 51 and in contact with the third electrode, heating part changing resistance when current passes between the electrodes.

4. Regarding claim 2, the heating part is provided on both sides of the variable resistance part 51 by separation 56 and 58.

5. Regarding claim 3, the heating part is provided surrounding the resistance part since they are located on both side of the resistance part by 56, 57 and 58.

6. Regarding claims 4 to 6, fig. 5 discloses the claimed structure of electrodes positioned opposite the thermistor body. Where the first electrode is on one side, the second on the other, and the third on either side of the resistance part.

7. Regarding claim 7, the PTC is a conductive polymer (col. 2, line 60).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Vind, US Pat. 4,251,793.

9. Vind teaches a thermistor having variable resistance part 28 (a PTC in figs. 3 and 4) with a first electrode 21, a second electrode 22 and a third electrode 23 and not in contact with the first or second electrode. A heating part (sections not contacting the electrodes) integrally formed with the same material as the variable resistance part 28 and in contact with the third electrode, heating part changing resistance when current passes between the electrodes.

10. Regarding claim 3, the heating part (sections not contacting the electrodes) is provide surrounding the resistance part 28 (fig. 3).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung Lee whose telephone number is (571)272-1994. The examiner can normally be reached on M and W-F from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kyung Lee/
Primary Examiner, Art Unit 2832